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TANGANYIKA

Annual Report

of the

Development Organization

1950

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TANGANYIKA

Development Organization Annual Report for the year 1950

CHAPTER I

Introduction

Progress under the Development and Welfare Plan for Tanganyika quickened considerably during 1950. An expenditure of £851,000 in 1948 and £2,216,000 in 1949, rose to £3,138,158 in 1950.

2. It is not proposed in the main body of this report to describe in detail the progress made in all the schemes financed by Development funds, but rather to trace a broad outline of the Plan in the Territory as a whole throughout 1950. During the course of the year, and as a result of rising costs and altered priorities, it became necessary to recast the whole of the original Plan and the new Revised Development and Welfare Plan for Tanganyika was submitted to the Legislature in November, 1950. The Revised Plan envisages an expenditure during the period 1950–1956 of approximately £24,000,000. In formulating this revision, prior consideration was given to those basic requirements on which the economic development of the country must depend, and emphasis was therefore placed on communications, water supplies, food production, and the development of natural resources, including important investigations into the mining potential of the country. The provision made (£3,000,000) for Social Services might at first sight appear small, but it must be remembered that besides the prior claim of economic development, the major part of the funds required for Social Services are and will continue to be met from recurrent expenditure under the Territorial Budget. The main heads of expenditure of the Plan are :—

	£
1. Conservation and Development of Natural Resources	4,335,191
2. Communications (Roads, Aerodromes and Plant)	8,783,000
3. Social Services	2,934,000
4. Township Development	3,573,000
5. Public Buildings and Works	3,480,000
6. African Urban Housing Schemes	1,230,000
7. Miscellaneous	115,000

It is of interest to compare the proportionate allocation of expenditure under the Revised Plan with that under the original Ten-Year Plan :—

	Original Ten-Year Plan		Revised Plan	
	£	%	£	%
1. Conservation and Development of Natural Resources	2,958,500	16·5	4,335,191	17·8
2. Communications	6,944,800	38·8	8,783,000	35·9
3. Social Services	5,250,500	29·4	2,934,000	12·0
4. Township Development	1,129,500	6·3	3,573,000	14·6
5. Public Buildings and Works	1,000,000	5·6	3,480,000	14·2
6. African Urban Housing	300,000	1·7	1,230,000	5·0
7. Miscellaneous	300,000	1·7	115,000	0·5
	17,883,300	100·0	24,450,191	100·0

3. During the year it also became possible to assess the progress made on the forty-one schemes initiated under the Plan for the conservation and development of natural resources. These schemes, which are described in detail in Appendix I, vary considerably in size and scope, including as they do, researches into the increased production of copra, tobacco, rice, cotton and coffee; inland fish farms; the improvement of the beeswax industry; experiments and demonstrations in animal husbandry and pasture management and facilities for raising the standard of agricultural education. Under these schemes are also included the Development of Sukumaland, where £200,000 has already been spent on the building of a headquarters site and the collection of staff and equipment necessary to implement the plan for the opening up of new expansion areas for population and cattle and for the rehabilitation of the old overcrowded areas. Likewise included is the rehabilitation of part of the Mbulu District, where 600 square miles of country have been opened for settlement by the development of water supplies and selective tsetse clearing and where the introduction of voluntary culling was a notable event. During the year attention was given to the major problem of the highland regions of the Northern and Tanga Provinces, where, from Meru in the north to the Usambaras 200 miles to the south-east the increase in population has subjected the mountain habitat of some 1,000,000 Africans to increasing overuse resulting in a decline in fertility.

4. In the main the first objective of the various plans described below has been to make available for cultivation areas in the valleys and plains below the mountains, and at the same time to restore fertility to the wasting lands in the hills by sound agricultural practice. During the year a start was made on the implementation of the Wilson Report, designed to relieve the land pressure on Kilimanjaro, and work began on the water development in the expansion areas on the plains scheduled under this Plan.

5. To the south-east, the Mlalo Scheme, which has been operating for two years, was extended in the planning stage to a wider implementation of some of the principles and methods which has become of clear value during its operation and it was called, in its new form, the Usambara Scheme.

6. The Report from the Water Consultants engaged to examine the Pangani River Basin has now been received and is being studied in order to ascertain what part this region, with its potential for irrigated cultivation, can play in the general attempt to attract surplus population from the hills by offering them an opportunity for increased food production, if necessary by mechanization, in the plains below.

7. The Masai Development Plan, which intends by increasing water supplies and improving pasture management to introduce a better cattle economy among the Masai, was drawn up during 1950. Some £160,000 is expected to be spent in the next five years on this scheme and the Masai themselves have agreed to make contributions from local funds.

8. The serious disruption of food supplies which periodic drought conditions introduce into the economy of Tanganyika will have been, it is hoped, lessened by the construction during the year of a considerable number of grain stores, which, with the increased effectiveness of insecticide protection, will allow reserves from a year of plenty to be stored against a shortfall during a period of drought.

9. The greater availability of piping and machinery and the addition of new staff allowed considerable progress in the improvement of water supplies generally, and work on sixty-five separate installations, comprising dams, boreholes, wells and piped supplies, was undertaken during the year. In most cases where this work was completed for Native Authorities, their contribution has been one-third of the capital cost and thereafter payments to meet a maintenance and renewals fund. Work continued on the new water supply to Dar es Salaam, where additional supplies of water will be obtained from the Mzinga Creek, and the first increase is anticipated in early 1951. A large contract was signed to improve Dar es Salaam's sewerage disposal.

10. During 1950 a Communications Survey Committee met to examine the programme of road, rail, sea and air communications, as well as telecommunications, as set out in the Ten-Year Development Plan drawn up in 1946, and which in the light of current conditions, costs and development, needed review. The comprehensive recommendations of this Committee have been accepted by Government. General improvements to the road communications of the Territory included the first stages of a modern bitumenized road from Namanga on the Kenya border through Arusha to Moshi and beyond. During the year sixty miles of new alignment were prepared and seventeen miles of new road were laid. Surveys were completed on the Dar es Salaam Morogoro Road and a contract is being placed early in 1951. Detailed planning continued on roads from Morogoro to Iringa, Tanga to Korogwe and a link between the roads running inland from Dar es Salaam and Tanga. A direct allocation of funds to Provincial Commissioners was made to allow the construction of minor roads designed to open up areas of potential economic value.

11. Work continued on the improvement of aerodromes throughout the Territory, and it is now intended gradually to bring all the major aerodromes (excluding Dar es Salaam) up to the International Standard "F". Engineering Consultants to the Government finalized their plans for the new Dar es Salaam Airport, on which preliminary clearing was started in 1950.

12. The Education Department with the funds made available to it under the Development Estimates was engaged during 1950 with an extensive building programme consisting of secondary schools, teacher training centres, primary schools and a teacher training unit for girls.

13. Activity in the medical field consisted, apart from minor improvements to a number of hospitals and medical centres, of work on the addition to the Territorial Tuberculosis Hospital at Kibongoto; a start was also made at Korogwe on a new hospital which will contain 100 beds in the first instance.

14. In one field progress was not so satisfactory, and that was in the erection of African Urban Housing Estates. The problem of erecting, either by direct labour or by contract, an adequate house for the ordinary urban African wage-earner has proved here, as in other Territories, most difficult. Constantly rising building costs have now made the rental of the ordinary two- or three-roomed permanent African house almost beyond the capacity of the low wage-earner, unless some degree of subsidization is accepted. However, a separate organization which will specialize in the problem of providing adequate African urban housing is being formed and £1¼ million have been allocated under the Revised Plan for an extensive programme of building,

once the best ways and means have been discovered. Already several experimental houses have been erected. Other building activity during the year included the construction of a large number of European and Asian houses, as well as work on the provision of new district headquarters and offices and the construction of workshops, grain stores and depot stores.

15. Interest in the availability of loans from government for schemes designed to increase agricultural production for Africans and Arabs increased during the year, and a total of £37,500 was lent for this purpose. These schemes cover a wide field ranging from £50 to £100 loans to individuals for cultivation by hand or ox plough, to large advances such as £15,000 made to the Rufiji Native Authority for mechanized preparation of rice fields. Here, during 1950, 3,200 acres were ploughed. Elsewhere in the same Province mechanized cultivation by Africans by the use of hired tractors is growing in popularity and amounted to 200 acres in Bagamoyo, 500 acres in Kilosa and 50 acres in the Morogoro District as well as 300 acres at Kilwa. In the Same District the Native Authorities hired contractors for their ploughing having been granted a loan, and pilot schemes were launched in several other places. In view of the obvious importance that this development may play in the economy of the ordinary peasant agriculturist its progress is being carefully encouraged and guided.

16. The commercial and industrial world, on whose efforts the major part of the economic development of the country must depend, enjoyed a year of expanding economy. Sisal exports reached a new record of £11,000,000 and the confidence in the commercial future of the Territory was shown by the registration of twenty-six new companies, both private and public, from outside Tanganyika with a nominal capital of £10,325,000 and 10,000,000 lire.

17. Geological reconnaissance and survey continued in many areas. Iron ore from the proximity of the coal deposits in the South was sent home to Sweden for testing during the last quarter of the year. The search for minerals of strategic importance was assisted by the arrival of three of the seven American experts included under E.C.A. assistance.

18. As regards Development staff, the most noteworthy event in 1950 was the retirement of Mr. L. L. R. Buckland. This officer had combined the duties of Executive Officer, Development, with those of head of the important Water Development Department. His outstanding services were recognized by the award of the C.B.E. in the 1951 New Year's Honours List.

19. Detailed accounts of the various development schemes and projects are given in Appendix I, and in Appendix II will be found the actual expenditure up to 1950.

CHAPTER II

Conservation and Development of Natural Resources

To ensure the conservation and development of natural resources over forty schemes covering the wide field of soil conservation, rehabilitation of land whose fertility has been destroyed by over-use, mining, animal husbandry, agricultural production, fish farms and forestry research, have been planned and financed. Full details of all these schemes are shown in Appendix I.

2. The experiments carried out in fish farming during 1950 at Korogwe have been successful and it is Government's intention to expand this industry and start similar projects in other parts of the Territory. The area has been fed by a furrow from the Pangani River and the scheme has been under the control of Mr. C. E. Gould, the Government Fisheries Officer. The fish bred are *Tilapia*, and experiments are being conducted on different species of this fish. It was found that four crops of fish could be taken each year from one pond and that each crop would produce one-quarter of a ton per acre. A ton of fish is valued at £56. In a further experiment rice was grown in fish ponds in which case the annual output of fish was reduced to about two hundred pounds, but a crop of one ton of paddy was obtained per acre. This was only a preliminary trial and it is quite certain that results can be improved. It is now proposed to start a small school at Korogwe to train Africans in fish farming. It is hoped that this industry, if encouraged, may lead to a wider use of this method of producing protein foodstuffs and no doubt large employers of labour may well find this technique of value in feeding their labour.

3. Another notable success during the year was the institution of voluntary culling at Mbulu, where the plan financed by Development funds for reducing the population on the over-used highlands by opening up new expansion areas and rehabilitating the old areas, continued during the year. Over 600 square miles of new country were opened up, and the acceptance by the tribesmen of a voluntary thirty-three per cent culling—the first time that such a measure has proved successful in East Africa—must reflect very favourably on the efforts of the District team, led by the District Commissioner.

4. In Sukumaland, where another large scheme for expansion and rehabilitation is in progress, a heavy drought resulted in the loss of six hundred thousand head of cattle, thereby reducing the over-all cattle population in relation to the land to a scale which, if it could be maintained, would no longer over-strain the grazing resources of this area. Legislation, whose purpose is to control the density of cattle population, has been passed. The headquarters site for this scheme was almost completed during the year and with the arrival of heavy earth-moving machinery, the programme of large scale dam construction began. Surveys of the areas to be developed and rehabilitated continue.

5. On the Mkata Plain, an area offering excellent grazing but threatened by tsetse fly and periodic overflooding, there has been an experiment during the year to maintain three herds of cattle, two of which were subject to protection from disease by modern drugs. The herd with no protection showed a ninety-seven per cent infection from trypanosomiasis after one hundred days and a forty per cent mortality, whereas the other herds, which were given anthrycide showed no signs of trypanosomiasis after ninety days and by the 102nd day a 6·2 per cent infection.

6. The opening by Tanganyika Packers of a large meat factory in Dar es Salaam, with a potential of eventually handling 100,000 head a year has given a further stimulus to meat production.

7. The appointment of a Beeswax Officer, and the initial survey that he has completed, reveals that this industry can be greatly expanded. His efforts during the year have in the main been in the Western Province and have

consisted in a study of the local bee and improved methods of production, with a view to altering the very wasteful methods of collection employed by native bee-hunters. In addition he was able to complete a survey of the Southern Province which revealed that bee products there could be considerably increased; as a result funds have been included for this purpose in the plan for the development of Southern Province.

8. This latter plan is for the general development of this hitherto backward part of the Territory. In the first stage it is proposed to augment staff with a view to increasing food production, to open new areas for other crops such as tobacco, to provide additional water supplies and to undertake construction of a number of feeder roads to the new railway line. Towards the end of 1950 the planning stage was well advanced.

9. In the Lake Province, progress was made with the introduction of two new important strains of cotton—U.K. 46 and 48—by the Cotton Board. In addition, a new saw gin was completed in this Province and has as its object the study of this method of ginning the seed cotton crop as an alternative to the present roller ginning system.

10. During the year an Indian School of Agriculture was opened at Morogoro, the attendance at which consisted of twenty Indian students from Tanganyika and ten Indian students from Kenya. The course will consist of eighteen months' duration.

11. In Bukoba District the erection of eleven coffee hulleries was completed which it is hoped will greatly raise the quality and uniformity of Bukoba Hard Coffee.

12. In addition to the activity of Messrs. Steele Brothers, who with Government have opened a large area for forest exploitation in the Southern Province, and have also initiated a survey for timber resources on Kilimanjaro, forestry research was carried out in the dry forest region of Mpanda; the results may be of great importance in view of potential mineral wealth of that area.

13. Mining activity included further reconnaissance of the coalfields of the south. This is now being undertaken by the Colonial Development Corporation whose researches are making progress.

14. In addition to these major activities under the conservation and development of natural resources, further minor schemes are detailed in Appendix I.

CHAPTER III

Communications

Major road works, mostly carried out through the Consulting Engineers to the Tanganyika Government, have progressed steadily during 1950. In addition to completing the alignment of the Namanga/Arusha/Moshi road—where actual construction on the north section has well advanced—the survey of the Dar es Salaam/Morogoro road has been completed and tenders for construction were being considered at the end of the year. The survey continues of another major road from Tanga to Korogwe, and the link between

this and the Dar es Salaam/Morogoro stretch is being examined. A preliminary survey has been completed in respect of a high standard gravel road linking Morogoro to Iringa. When completed, these roads will ensure that Dar es Salaam and Tanga are mutually connected and have direct road access to the interior of the Territory. A preliminary realignment has taken place on the road inland from Lindi. In addition much betterment work has been undertaken by the Public Works Department during the year. Traffic has greatly increased on all major roads and it has not therefore been an easy task to maintain or improve the roads in certain areas. Mechanical construction and betterment units are now in process of being formed. Work on the road from Dar es Salaam to Tanganyika Packers Factory was started by the first constructional unit during 1950.

2. To meet the internal requirements for minor improvements to communications, District Commissioners were able with the funds allocated to Provinces to construct a number of new roads, which are calculated to assist economic and agricultural development.

3. Work continued on the steady improvement of aerodromes in Tanganyika, and a priority list was formulated during the year for the aerodromes chosen to be improved or constructed.

These, in order of priority were :—

Tanga	Mafia
Mbeya	Kilwa
Moshi	Kigoma
Arusha	Musoma
Mwanza	Oldeani.

Plans were almost completed for the construction of a new and modern aerodrome in Dar es Salaam, seven miles from the centre of the town, and preliminary clearing work was actually begun on the site by the end of 1950. Construction of a new aerodrome at Mtwara was also planned. To assist Government in the important task of planning aerodrome improvement, the Aerodromes Advisory Committee was expanded during the year to include unofficial representatives of the various interests concerned with civil aviation. A new aerodrome was completed at Mombo and improvements to other aerodromes included the construction of hangar accommodation at Dar es Salaam and Tabora.

4. Field surveys were carried out for improvements to the aerodromes at Tanga and Mbeya and for new aerodromes at Ifunda, Kilwa and Mtwara, the latter by Consulting Engineers.

CHAPTER IV

Social Services

A Nurses' Training School was opened at Machame in April, where Africans may take a three-year course. Work continued at the Kibongoto Tuberculosis Hospital, and a special mental hospital for criminal lunatics was constructed at Dodoma. This latter institution is designed to be administered on similar lines to the Broadmoor Institutions in the United Kingdom, and specially trained staff have to be recruited for its management. It has a

capacity for 280 inmates, and has allowed criminal lunatics to be separated from the other mental patients and given the specialized attention such patients require. It is the first Broadmoor Institution of its kind in the Colonial Empire. Accommodation was provided for the B.E.L.R.A. workers attached to the Leprosy Settlements. Preliminary plans were prepared for the Group Hospital to be built at Dar es Salaam, and these are now being examined.

2. The Ifunda Training Centre, originally constructed and used by the Overseas Food Corporation, was taken over by Government and utilized, in the first instance, by the Training Division of the Labour Department. It is now, however, administered by the Director of Education. The Centre caters for a wide variety of technical courses ranging in duration from six months to three years. It is expected that it will have its full capacity of 500 students during 1951.

3. The Education Department, with the funds made available to it under the Development Budget was also engaged during 1950 on an extensive building programme consisting of three new schools, two teacher training centres, extensions to existing provincial secondary and middle schools, as well as primary schools for the main townships, girls' schools at Mbeya and Machame and a girls' teacher training unit at Bwiru.

CHAPTER V

Works and Miscellaneous

The recently established Town Planning Unit expanded in size and scope during the year, and active work is now proceeding on eighteen towns in the Territory. Considerable work was undertaken in the detailed design of sections of various townships in order to attempt to keep town planning one step in advance of the rapid economic development now taking place. Layout plans were prepared for low, medium and high density housing, commercial areas and industrial groups. In Dar es Salaam, the survey of the very crowded central areas in the municipality has been completed with a view to providing the basic data for a comprehensive development scheme. Proposals were also made during the year for the revision on modern lines of the Town Planning Legislation for the Territory. The Town Planning Unit continued to give advice to the Land Office on the utilization and disposal of plots in urban areas. The data which it now has available were of great use and interest to the Public Utilities, Local and Highway Authorities and the Government Departments concerned in the development of towns and services.

2. The design and survey of new layouts for African housing in townships continued throughout the year, and progress was made with the provision of services. A survey was carried out in Dar es Salaam to determine the number of new plots required to accommodate those Africans living in unauthorized settlements which had come into being as a result of the rapid expansion of the town. The sum of £10,000 was granted to the Dar es Salaam Municipal Council for the provision of roads and surface water supplies, and the construction of a large storage tank was begun by the Public Works Department.

The Chief Town Planning Officer has been giving considerable attention to ensuring that suitable areas and lay-outs for African housing will be prepared so that these requirements may be well catered for within the general expansion of Dar es Salaam, which continues unabated. Under the Revised Development Plan, the amount allocated for African Urban Housing was increased from £300,000 to £1,230,000.

3. Full details of the activities of the Public Works Department during 1950 will be recorded in the Departmental Annual Report, and it is proposed to give here only a general summary of the works undertaken as part of the Development Plan. The total expenditure of the Public Works Department during the year was £2,265,700—an increase of seventy-five per cent on the 1949 figure of £1,293,970. This expenditure may be sub-divided approximately as follows :—

	£
Personal Emoluments and Other Charges	258,750
Public Works Recurrent	506,000
Public Works Extraordinary	253,000
Works for other departments	135,250
Development Works	1,112,700
	£2,265,700

4. The considerable proportion of the resources of the department was engaged on building construction, particularly European Housing, in an endeavour to provide accommodation for staff and this concentration of effort can only be temporary if other essential services, such as aerodromes, roads, water supplies, etc., are to receive their appropriate attention. Construction, mostly building works, continued or was started on the following projects :—

Instructors' School, Ukiriguru.
Extension of Ukiriguru Experimental Station.
Bukoba Coffee Sub-Station.
Kibongoto Tuberculosis Hospital Extensions.
Korogwe Hospital.
African Girls' School, Tanga.
Senior Secondary African Boys' School, Tabora.
African Girls' School, Tabora.
Primary School, Arusha.
Primary School, Moshi.
African Girls' School, Machame.
African Girls' School, Mbeya.
European School, Mbeya.
African Urban Housing, Dar es Salaam.
Provincial Workshops and Depots.
New Government Stores, Dar es Salaam.
European Housing throughout the Territory.
Asian Housing throughout the Territory.
African Housing throughout the Territory.
Office Accommodation.
Grain Storage Depots throughout the Territory.

5. With regard to housing accommodation generally, the following numbers of quarters were actually completed during the year and work continues throughout the Territory :—

European	182 Quarters.
Asian	42 ,,
African	318 ,,

6. Reference has already been made to the work performed by Public Works Department and Consultants on Territorial roads. The Consulting Engineers also were responsible for the preparation of the project for the new Dar es Salaam aerodrome and the contract for initial clearing was arranged by the Public Works Department at the end of the year. In addition as described earlier the Public Works Department undertook a construction and improvement programme on other aerodromes.

7. With regard to water supplies and sewage disposal, particularly in Dar es Salaam Municipality, the contract for the supply of water from Mzinga Creek was in progress and a contract was let for the main drainage scheme. Many water supply reticulation systems in other townships were extended but hardly sufficiently to meet the demand for development. Further planning for improvement to the various Township water supplies is in progress to an approved priority programme.

8. The Public Works Department was responsible during the year for the administration and technical control of one firm of United Kingdom Engineering Consultants, one United Kingdom Architectural Consultant, and four local Consulting Architects. The department is also responsible for the technical control of a further firm of United Kingdom Consulting Engineers and arranges for the local engagement of several engineering surveyors to undertake engineering location works. The work involved in the control of these Consultants is considerable and unfortunately limits the work which can be undertaken by departmental technical officers.

9. The Architectural Branch was engaged on the planning and design of the following major works :—

Junior European School, Dar es Salaam.

Government Press, Dar es Salaam.

Maternity Ward, European Hospital, Dar es Salaam.

Aerodrome Terminal buildings.

Korogwe Hospital.

Depot and Stores.

Various African Educational Projects, as well as routine works on European, Asian and African housing and other buildings.

10. Although an expenditure of £456,327 was incurred in respect of maintenance services throughout the Territory, it is considered that this amount is inadequate to cover the growing needs resulting from the development of the Territory. The department was hard pressed to keep abreast with essential services for the Territory in general.

APPENDIX I

1. *Training of Agricultural Instructors, Ukiriguru.*—The new buildings of the training centre were officially opened on 3rd March, 1950. This centre is now equipped for 130 pupils taking part in a two-year course of instruction in agriculture; in addition some vernacular school teachers are included in each year's intake.

Twenty-five acres of farm land attached to the school and a school garden have been laid out.

2. *Agricultural Training for Indians.*—The Indian Agricultural School, Morogoro, has just begun its first course, which is designed to give a practical training for work on the land.

3. *Improvement of Supplies of Planting Materials.*—This scheme, which is designed to produce and multiply strains of disease-resistant potatoes was set back in 1949/50 by a new virus disease which attacked the multiplication plots and work had to be temporarily suspended. Further varieties were received from Scotland late in 1950 and research continued. Good results have been achieved with the fruit trees initially purchased in 1948 and budding will be started by the end of 1951.

4. *The Development of Tobacco Industry.*—An extensive range of experiments and trials continued in the Southern Highlands and Songea in 1950. A Tobacco officer, stationed in Songea District through the year and having made a general reconnaissance, selected an area suitable for tobacco development and blocks for leasing are being demarcated. A trial block of twenty-five acres has already been planted. Expansion of the tobacco industry in the Western Province shows a steady growth from four tons in 1948, to thirty-six tons in 1949 and seventy-two tons in 1950.

5. *The Improvement of Copra Industry.*—Two Agricultural Assistants, paid for under the scheme, continued their work in the reclamation of neglected coconut holdings and the results from the operation of the open hearth kiln built at Gombero in the Tanga District, where nuts collected from small holdings are made into high grade copra, have been received and are being analysed. The drought of 1949 affected the size and the quality of the nuts picked in 1950, but the kiln dried copra has been in great demand on the market.

6. *Extension of Ukiriguru Experimental Station.*—Work on the construction of buildings for this project is virtually complete and some mechanical equipment has been purchased from the U.S.A. The programme consists mainly of cotton breeding and strain testing and encouraging results have been achieved.

7. *Bukoba Coffee Sub-Station.*—Two buildings were almost completed during the year and a start made on the purchase of cattle for which water and a dip were installed. By the means of mixed farming the fertility of the soil will first be raised and then research begun into raising the yields from robusta and arabica coffee.

8. *Soil Conservation, East Kilimanjaro.*—Fourteen Instructors under the charge of an Agricultural Assistant were posted to Marangu, where damage from the heavy storms of March and April has been most severe. Results have, on the whole, been rather disappointing.

9. *Cotton Experimental Station, Honga.*—Already two European houses have been built and occupied. Some of the Labour Lines have been completed and tenders for the remaining buildings have been called for. Work continued on cotton selections and insecticidal trials.

10. *Development of Tumbi and Mwanhala Experimental Stations.*—The necessary provision of equipment and buildings, and the development of water supplies were almost completed during the year. By the extension of the Tumbi dam wall the capacity of the dam has been increased from one to five million gallons.

Experiments continued with seed production including mosaic resistant cassava and awned bulrush millet.

11. *Development of Rice Production, Southern Province.*—The building during the year of ten additional rice bunds now brings the total constructed to thirty-eight.

Variety and cultivation trials with different strains of paddy continued. Some success has been achieved in the production of uniform seed and seven tons of good seed was distributed from last year's crop.

12. *Improvement of Beeswax.*—The work of the Beeswax Officer has begun to show that the ramifications of the bee products industry, if suitably encouraged, could be very wide. Research continues in order to discover the best conditions for bee-keeping and plans for a laboratory to be built in 1951 have been made. A training course for instructors covering two years will begin in 1951.

13. *Inland Fisheries.*—Research continues by the Fisheries Officer, Kigoma, on the expansion of the lake fishing industry. A detailed survey has been planned for 1951. Good progress can be reported in the experiments at Korogwe where the technique of inland fish farms is being demonstrated.

14. *Marine Fisheries.*—No progress has yet been made in this scheme while the recruitment of a suitably trained man to operate it is awaited.

15. *Development of Ufipa District.*—The farm buildings on the Agricultural Station at Sumbawanga were completed and further equipment purchased.

16. *Multiplication of Improved Varieties of Cotton.*—This scheme has resulted in the distribution of the U.K. 46 variety of cotton over wide area in the Lake Province. A better variety still, U.K. 48, is being multiplied for distribution as seed during the 1950/1951 season.

17. *Dams for Rice Production.* Work continued on the construction of rice dams, either by ox scoops or hand labour in the Western and Lake Provinces. A total of six were completed. During 1951 it is proposed to introduce some mechanical dam building equipment.

18. *Bukoba Native Coffee Industry.*—Half of the eleven hulleries which it is intended to establish throughout the district for the treatment of coffee in Bukoba have been completed.

19. *Local Development Loan Fund.*—The interest in the credit available for African and Arab peasants in agricultural production schemes increased during the year and loans made amounted to £37,500. Despite the fact that some of the smaller schemes financed have got into difficulties, on the whole most satisfactory progress can be reported and already certain of the loans have been repaid in full, while the schemes which they made possible continue to operate. The schemes financed include five for mechanical cultivation.

It is hoped that this fund, which is providing the necessary capital for enterprising and reliable African agriculturists and thereby removing an obstacle which in the past has often greatly handicapped their activity, will go far to stimulating better food production.

20. *Kahama Agricultural Development Centre.*—The work to equip and develop this small centre was completed during the year. It is intended to demonstrate irrigated rice growing and mixed farming.

21. *Rungwe Small Holdings Scheme.*—A survey of soils has been completed and a plan for development is under discussion.

22. *Soil Conservation.*—Work was completed on the Headquarters of the Conservation Centre at Tengeru, where office accommodation and school buildings, garage and store blocks and the necessary quarters for European and African staff were being constructed. The two mechanical units operating in the Northern Province have been actively engaged in building terraces, diversion of ditches and water ways.

23. *Luengira Irrigation Scheme.*—A pilot furrow has been constructed and the yields obtained by the fifty cultivators who planted an acre each along its banks are reported to have been the best on record.

24. *Improvement of Furrows, Moshi Lowland.*—No new work has been done during the year because of the lack of supervisory staff. However, the furrows already constructed were maintained.

25. *Purchase and Erection of Saw Gin.*—The erection of an air blast gin at Ihale was completed and full scale tests began in October.

26. *Houses for Field Officers.*—Four houses for Field Officers have been completed at Same, Iringa, Ukiriguru and Handeni.

27. *Reclamation of the Luiche Swamp.*—Plans were drawn up for clearing in conjunction with the local Native Authorities, the Luiche River of obstructions and to restore for cultivation the fertile land flanking its banks.

28. *Printing and Distribution of "Agriculture in the Cultivation Steppe".*—"Agriculture in the Cultivation Steppe" and its Swahili version "Mambo ya Ukulima" was printed in 1949 and distributed early in 1950; in all 1,000 copies in English and 7,500 copies in Swahili were produced.

29. *Central Breeding Station, Mpwapwa.*—Work continued to complete the main building programme required. The stock established on the farm consisting of sheep, cattle, poultry and pigs had, on the whole, a successful year and analysis of the results gleaned from these trials continue.

30. *Development of the Ghee Industry, Lake Province.*—The Utegi school re-opened in March and several refresher courses were held. However interest in this school subsequently diminished until it had to be closed. The marketing system is under revision. The field training policy began to show results by an increase of graded clarified butter which previously was seldom produced.

31. *Northern Province Demonstration and Experimental Farm.*—A site was acquired and the plans for buildings approved and materials and equipment collected. Stock has been purchased, including 100 Boran cattle from Kenya, and Guernsey bulls and heifers, pigs and sheep from England. Trial crops were planted and a survey completed for a water supply to the farm. Two miles of five strand fencing was completed.

32. *African Veterinary Training Centre, Mpwapwa.*—Twelve successful candidates from a field of thirteen completed the first course.

33. *Iringa Stud Farm.*—During the year progress was made in completing the necessary farm buildings and the purchase of equipment. Pigs included in the original purchase have been maintained as a breeding herd and stocking up, including purchase of cattle from England, continues.

34. *Demonstration Farm, East Kilimanjaro.*—A farm has been acquired and its buildings put in order. An initial forty acres has been placed under cultivation, the water furrow improved and the first draft of stock appear to be doing well.

35. *Veterinary Centres.*—Centres have now been opened and staffed in the Lake, Western and Northern Provinces.

36. *Improvement of Stock Routes.*—A stock route connecting the Western and Lake Provinces to the Central Line was completed and the Singida-Kilema route was demarcated. Elsewhere improved water points and hand dressing stations were made on existing stock routes.

37. *Pasture Research.*—Experiments continued in Mpwapwa with methods of clearing and pasture control, and at Tumbi where a Research Officer is now stationed to carry out experiments on "Miombo" area.

38. *Pilot Ranching Scheme, Mkata Plains.*—Results became available on the first test of maintaining cattle on the Mkata Plains by protecting them from disease by the use of modern drugs. From a total herd of some 1,000 head there have been to date some fifty deaths. The remainder prospered and showed considerable increases in weight. Experiments continue to find the best wet season grazing in the event of heavy flooding. The results to date have been encouraging and it is hoped may encourage dairy farming or ranching in the area.

39. *Experimental Farm, Buha Highlands.*—To date the progress has been confined to small experiments in pasture control.

40. *Tsetse Clearing, Northern Province.*—This is to consist of work on tsetse clearing which is necessary in the implementation of the Wilson Report and operations will begin on the lower areas of Kilimanjaro.

41. *Forestry.*—Thirty-eight acres for camphor regeneration were laid down on Kilimanjaro. Air and ground reconnaissances extending from Songea to Kilwa were undertaken. A Forester stationed at Mpanda continued examination of the dry forest in that region. The drought of 1949 hit some of the plantations badly but plantings recovered surprisingly well.

42. *Development of Water Supplies.*—The staff position improved greatly during the year and with better availability of piping and equipment a full year's progress can be reported.

In all expenditure amounted to £234,380. This work covered water installations spread throughout the Territory, consisting of dams, wells, boreholes and piped supplies. In addition the completion of better offices and storage facilities up-country will permit greater ability to meet local needs in the future. Plans were also formulated to increase the staff and equipment of this vital department whose activities are fully covered in its own Annual Report.

43. (a) *Geological Survey.*—The staff has been expanded by three new transfers to the Territory and by three new appointments. In addition to general geological reconnaissance, special investigations are being conducted with a view to increasing production of mica. Assistance is being given to the Colonial Development Corporation in their coal investigations.

43. (b) *Geological Survey (E.C.A.).*—Three of the seven American experts permitted under this scheme have arrived and are engaged specially on investigations for minerals of strategic importance.

44. *Iron Investigations.*—Samples of iron ore collected from the neighbourhood of the southern coal-fields have been sent to Sweden to ascertain whether the product is of commercial value.

45. *Salt Investigations.*—An officer has been secured on contract and is pursuing a systematic investigation of the potentialities of salt deposits in the Lake Eyasi and Lake Natron areas.

46. *Gold Investigations (Lupa).*—A diamond drill belonging to the Geological Department drilled for gold on the Lupa.

47. *Coal Investigations.*—The general investigation of coal continued during the year.

48. *Coal Investigations (Kitiwaka-Mchuchuma).*—General investigations led to the conclusion that the coal-fields at Kitiwaka-Mchuchuma were more promising than those at Muhukulu and geological survey of the field is almost complete. Seams up to twenty-five feet thick were discovered and for African coal were of good quality. Drilling and shaft sinking continues to ascertain the lateral extent of these seams.

49. *Purchase of Geophysical Instruments.*—Several purchases of essential equipment and instruments were made during the year.

50. *Natural Resources School, Tengeru.*—This project for which a provision of £300,000 has been made, has not yet been started.

51. *Uluguru Land Usage.*—This scheme with its purpose of improved land utilisation on the highlands has made good progress during the year

and pilot areas have now been placed in the charge of field officers. Preliminary work on water courses and water sheds, the construction of fire-breaks, terracing and afforestation has been begun. The effect of work in the high areas on steadying the run-off of large rivers is being analysed.

52. *Ulanga Rural Development Scheme.*—A school has now been built and opened and nine dispensaries, each with an orchard so that out-patients may be provided with fresh fruit while under treatment, are functioning excellently and are well attended. A stock farm has been opened to ascertain whether animals can be kept in this area.

53. *Rehabilitation of the Mlalo Basin.*—This scheme, which experienced certain initial difficulties, has now been amalgamated with a scheme which is designed to cover the whole of Usambara including the establishment of pilot areas for humans and stock in the plains below the mountains and is now changed in title to the Usambara Scheme.

54. *Development of Sukumaland.*—During 1950 the main programme for establishing the Headquarters of the Sukumaland Federation at Malya was completed. This now consists of housing, administrative buildings, workshops, a stock farm and a central meeting hall for the chiefs belonging to the Federation. Surveys of the various areas to be developed were completed and a programme for dam construction drawn up. The loss of 600,000 head of cattle through drastic drought conditions temporarily reduced the cattle population in relation to the area to a figure that the land can support without deterioration. By determined propaganda and by the efforts of the native population themselves for the controlling of cattle density, it is hoped to be able to maintain this state of affairs.

The mechanised equipment for dam construction has now arrived at Malya and work has begun.

55. *Development of Mbulu District.*—Over 600 square miles of new country has now been opened up for occupation by the installation of water supplies and the construction of selective tsetse clearings. As was hoped, people from the over-populated highlands have now moved into these areas. The year showed great progress.

The main efforts consisted of voluntary turnouts by the people for tsetse clearing; active propaganda by the District Team which led to the acceptance by the tribesmen of a destocking programme involving a thirty-three per cent reduction of stock by the Iraqu. This must be considered a signal success and credit is due to all concerned.

In the rehabilitation programme work included the construction of contour banks and demonstrations of bench terraces and tie ridging. Individual plantations of bark wattle have been started. In addition three pilot schemes for mechanical cultivation were laid out and ploughing on hire charges has begun.

56. *Kolo Rehabilitation Scheme.*—The original conception of work on a small experimental area at Kolo has been expanded to cover the whole of the badly eroded hill area in the Kondoa-Irangi district, where over-grazing has led to very severe sheet and gully erosion.

Good progress was made in contour ridging (273 miles) and in the movement of stock to the plains.

57. *Development of the Pangani Basin.*—During the year a survey to ascertain the possibilities of this scheme was completed and it is now being examined.

58. *Aircraft Spraying of Insecticides.*

59. *Colonial Insecticide Research.*—At the time of printing the full result of these two schemes is not available.

60. *Further Schemes.*—In addition to the Pangani River Basin Development Scheme another plan under consideration is the development of the Southern Province, where a great potential agricultural output exists. Initial work also began on the Masai Development Plan in which steps will be taken to improve the cattle economy in Masailand. A smaller scheme for improved agriculture and a better economy in the Biharamulo District is also in the planning stage.

61. *Communications.*—There has been progress made with minor improvements to existing aerodromes and a priority list of aerodromes has been decided on for improvement to the International Standard F.

Plans are completed for a new aerodrome at Dar es Salaam and work on the new site has just begun.

Tenders for a contract for two and perhaps a third deep water berth at Dar es Salaam are now under consideration by the Railway Administration.

62. *African Housing.*—The design and survey of new layouts for African housing in Townships continued throughout the year and progress was also made with the provision of services. A survey was carried out in Dar es Salaam by an Administrative Officer in order to determine the number of new plots which would be required to accommodate those living in unauthorised settlements which had sprung up as a result of rapid expansion of the town and the inclusion within its boundaries of areas which were formerly rural. The number of plots allocated in the new African housing layout in the Temeke area of Dar es Salaam now totals 1,051. The sum of £10,000 was granted to the Dar es Salaam Municipal Council for the provision of roads and surface water supplies, and construction of a storage tank to serve water kiosks was begun by the Public Works Department. Land was also made available for African housing in the Kinondoni and Magomeni areas of Dar es Salaam and a new Minor Settlement was laid out just outside the Municipal boundaries where building on traditional lines is permitted. In addition, the Chief Town Planning Officer prepared a layout incorporating the fishing village of Msasani, which has recently been brought within the Municipality. It will provide accommodation for a community engaged in diverse occupations, but survey and allocation of plots awaits the provision of roads and water. A survey of African housing was also carried out by a Labour Officer in Arusha and additional plots have now been made available in consultation with the Chief Town Planning Officer. The Ilala housing scheme in Dar es Salaam which contains approximately 300 houses and shops for renting to the general African public, was completed.

APPENDIX II

EXPENDITURE UNDER THE DEVELOPMENT BUDGET TO 31.12.50

Details of Expenditure	Actual Expenditure to 31.12.48	Actual Expenditure 1949	Actual Expenditure 1950	Total to 31.12.50	Estimate 1951
	£	£	£	£	£
Section I Conservation and Development of Natural Resources					
Agriculture and Animal Husbandry	334,032	228,729	359,117	921,878	566,400
Forestry	9,736	14,088	22,724	46,548	42,015
Development of Water Supplies ...	284,082	162,259	168,417	614,758	138,000
Soil Conservation	1,879	21,934	36,838	60,651	23,925
Survey	734	5,150	—	5,884	—
Geological Survey	4,039	12,223	17,980	34,242	47,030
Geological Survey (E.C.A.)	—		7,575	7,575	7,450
Mineral Development	1,193	17,914	13,582	32,689	10,929
Total Section I £	635,695	462,297	626,233	1,724,225	835,749
Section II Communications					
Roads	113,437	179,852	1,093,819	1,387,108	1,430,000
Improvements to Aerodromes ...	46,816	29,648	13,895	90,359	135,000
Telecommunications	43,315	200,000	—	243,315	—
Total Section II £	203,568	409,500	1,107,714	1,720,782	1,565,000
Section III Social Services					
Public Health	1,940	5,963	38,963	46,770	182,826
Education	212,785	291,309	291,965	732,059	166,600
Social Centres	22,640	3,136	1,502	27,278	35,000
Social Development			3,644	3,644	44,451
Total Section III £	237,365	236,312	336,074	809,751	428,877
Section IV Miscellaneous					
Township Development ...	39,736	104,202	449,714	593,652	736,000
Public Buildings and Works ...	271,872	340,912	905,772	1,518,556	1,573,400
Land Settlement	14,451	9,763	—	24,214	—
Subventions	14,334	14,187	—	28,521	—
Executive Organization	21,903	5,950	9,526	37,379	8,975
Land Acquisition		103,975	—	103,975	—
Miscellaneous Services		—	3,125	3,125	3,385
Total Section IV £	362,296	578,989	1,368,137	2,309,422	2,321,760
Total £	1,438,924	1,687,098	3,438,158	6,564,180	5,151,386